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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/820,436

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Robert Gordon Dyke

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EXAMINER

ROOT, ROBERT M

ART UNIT

PAPER NUMBER

2616

NOTIFICATION DATE

DELIVERY MODE

07/24/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No. 10/820,436	Applicant(s) DYKE, ROBERT GORDON	
	Examiner ROBERT ROOT	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 12-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 12-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-6, 13, 18-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jordan et al (US 6,724,751) in view of Tate et al (US 5,933,607).

4. As for Claim 1, Jordan discloses a method for distributing time division multiplexed (TDM) data in a data communication device (Column 7, Line 65 – Column 8, Line 7 discloses a voice processing unit includes a TDM bus), the method comprising acts of:

receiving, from at least one TDM source, at least one timeslot associated with a TDM communication (Column 8, Lines 8-18 discloses for incoming telephony signals, the line interface unit extracts the telephony signal from each telephony channel in the trunk, and puts the telephony signal from each telephony channel onto a separate time slot on the TDM bus); and

wherein the act of receiving does not include the use of a jitter buffer at the destination (Column 7, Line 65 – Column 8, Line 7 discloses a voice processing unit includes a TDM bus but does not disclose a jitter buffer is included within the unit).

5. Jordan does not expressly disclose inserting the at least one received timeslot into a packet;

transmitting the packet to a destination capable of recovering the at least one timeslot from the transmitted packet, and

receiving the packet at the destination.

6. Tate discloses in the same field of endeavor inserting the at least one received timeslot into a packet (Column 37, Lines 50-58 discloses insert 8 bit timeslot information into frames);

transmitting the packet to a destination capable of recovering the at least one timeslot from the transmitted packet (Column 9, Lines 56-57 discloses information is transmitted and received in cells or packets of a fixed size; Column 46, Line 65 – Column 47, Line 20 discloses each octet or timeslot carries a single constant bit rate channel, and octets are transferred to the output frame using ATM techniques), and

receiving the packet at the destination (Column 9, Lines 56-57 discloses information is transmitted and received in cells or packets of a fixed size).

7. Tate discloses this difference for the purpose of providing a system and method which facilitates the trafficking of continuous bit rate and non-continuous bit rate (Column 2, Lines 19-22).

8. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the method disclosed by Jordan and add to it the

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feature as disclosed above by Tate to create a method for distributing time division multiplexed data in a data communication device which facilitates the trafficking of continuous bit rate and non-continuous bit rate.

9. As for Claim 2, Jordan in view of Tate disclose an act of receiving the packet (Tate, Column 10, Lines 24-29 discloses a receiver module receiving cells), and forwarding the timeslot to at least one TDM destination (Tate, Column 37, Lines 59-61 discloses timeslot information for a particular timeslot is sourced from a receiver buffer), wherein the TDM source and TDM destination are located on at least one circuit board within a communication system (Tate, Figure 4A discloses a source and destination included within the same card).

10. As for Claim 3, Jordan in view of Tate disclose the at least one TDM source (Tate, Column 46, Lines 58-64 discloses carrying a group of TDM channels from source to destination) is a TDM bus (Jordan, Abstract), and wherein the act of receiving further comprises receiving the at least one timeslot (Tate, Column 37, Lines 59-61 discloses timeslot information for a particular timeslot is sourced from a receiver buffer) from the TDM bus (Jordan, Column 9, Lines 6-23 discloses extracting off the TDM bus).

11. As for Claim 4, Jordan in view of Tate disclose the act of transmitting the packet further comprises an act of transmitting the packet to the destination over a packet-based network (Jordan, Column 13, Lines 39-58 discloses communication through a packet-switched network).

12. As for Claim 5, Jordan in view of Tate disclose the packet-based network includes an Ethernet network (Tate, Column 8, Line 16 discloses a LAN capability including Ethernet).

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13. As for Claim 6, Jordan in view of Tate disclose the packet-based network transmits timeslot data over a full-duplex connection (Tate, Column 15, Lines 38-51 discloses full duplex continuous bit rate services).

14. As for Claim 13, Jordan in view of Tate disclose the packet includes data link information (Tate, Column 5, Lines 10-17 discloses active cells (packets) of user and control information are able to flow through the system), and wherein the act of transmitting the packet further comprises an act of transmitting the packet based only on the data link information (Tate, Column 18, Lines 44-53 discloses additional information from the external cell, such as control information header information relevant to the externally coupled devices or connections that sourced the external cell is passed to the cards control module via the line interface module where it may be sent, if necessary, as a part of the Communication System Control or signaling information, to the designated card(s) so that the external cell can be substantially completely reconstructed for re-emergence from the network or terminal interface, node or hub and continue onto its end destination).

15. As for Claim 18, Jordan in view of Tate disclose the act of transmitting the packet further comprises an act of transmitting the packet to the destination over a packet-based network (Jordan, Column 13, Lines 39-58 discloses communication through a packet-switched network) to another data communication device associated with the destination (Tate, Column 10, Lines 24-29 discloses a receiver module relays cells arriving on its backbone input to its output. Those cells passing through a receiver module which are addressed to that module are copied into an internal buffer as they pass through; the cell remains active as it moves along the backbone and thus can be received by many receiver modules).

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16. As for Claim 19, Jordan in view of Tate disclose an act of indicating, to the destination (Jordan, Column 12, Lines 6-21 discloses a device receiving an indication) when data in the at least one timeslot has changed (Tate, Column 37, Line 62 – Column 38, Line 5 discloses a Buff_Id value identifying one of the receive buffers from which time slot information is then sourced each time the timeslot becomes active).

17. As for Claim 20, Jordan in view of Tate disclose an act of providing a synchronization signal to the at least one TDM source and to the destination (Tate, Column 39, Lines 39-55 discloses the first device acts as a master and sends a synchronization message to the second device).

18. As for Claim 21, Jordan in view of Tate disclose the act of providing the synchronization signal includes an act of providing the synchronization signal (Tate, Column 39, Lines 39-55 discloses the first device acts as a master and sends a synchronization message to the second device) via a network separate from a network over which the packet is transmitted (Tate, Column 51, Lines 36-41 discloses synchronization cell being passed to interface card before being placed onto a transmit by-pass bus to get received by a downstream card; Tate, Column 6, Lines 46-52 discloses by-pass architecture enables portions of a communication system to be isolated and passed whilst portions of the system continue to function).

19. As for Claim 22, Jordan discloses a system for communicating time division multiplexed (TDM) data (Column 7, Line 65 – Column 8, Line 7 discloses a voice processing unit includes a TDM bus) comprising:

a first TDM communication entity that is adapted to receive at least one timeslot, the timeslot associated with a TDM connection (Column 8, Lines 8-18 discloses for incoming

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telephony signals, the line interface unit extracts the telephony signal from each telephony channel in the trunk, and puts the telephony signal from each telephony channel onto a separate time slot on the TDM bus); and

a second TDM communication entity coupled to the first TDM communication entity (Column 2, Lines 40-64 with reference to Figure 2 discloses processing unit 50A communicating to processing unit 50B) through a packet-based network (Column 13, Lines 39-58 discloses communication through a packet-switched network), wherein the first TDM communication entity is adapted to transmit a packet to the second TDM communication entity (Column 2, Lines 40-64 with reference to Figure 2 discloses communication between the processing unit) through the packet-based network (Column 13, Lines 39-58 discloses communication through a packet-switched network), wherein the second TDM communication entity does not implement a jitter buffer to receive one or more packets (Column 7, Line 65 – Column 8, Line 7 discloses a voice processing unit includes a TDM bus but does not disclose a jitter buffer is included within the unit).

20. Jordan does not expressly disclose the packet including the at least one timeslot (Column 37, Lines 50-58 discloses insert 8 bit timeslot information into frames).

21. Tate discloses in the same field of endeavor the packet including the at least one timeslot (Column 37, Lines 50-58 discloses insert 8 bit timeslot information into frames).

22. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the system disclosed by Jordan and add to it the feature as disclosed above by Tate to create a system for communicating time division

multiplexed data which facilitates the trafficking of continuous bit rate and non-continuous bit rate.

23. As for Claim 23, Jordan in view of Tate disclose at least one packet switch that couples the first TDM communication entity to the second TDM communication entity (Jordan, Column 2, Lines 40-64 with reference to Figure 2 discloses communication between the processing unit via an ATM switch), and wherein the at least one packet switch is adapted to forward the packet to the second TDM communication entity (Tate, Column 13, Lines 39-58 with reference to Figure 2 discloses communication through a packet-switched network via the ATM network; Tate, Figure 2 shows a communication path between processing units 50A and 50B that is routed through the ATM switch; an individual with ordinary skill in the art would recognize the ATM switch is adapted to route packet communication between 50A and 50B).

24. As for Claim 24, Jordan in view of Tate disclose a synchronizer (Tate, Column 51, Lines 26-355 discloses a switch operation synchronization circuit) coupled to the first TDM communication entity and the second TDM communication entity, the synchronizer providing a synchronization signal to the first TDM communication entity and the second TDM communication entity (Tate, Column 51, Lines 36-41 discloses synchronization cell being passed to interface card before being placed onto a transmit by-pass bus to get received by a downstream card).

25. As for Claim 25, Jordan in view of Tate disclose the synchronizer is coupled to the first TDM communication entity and the second TDM communication entity separately from the packet-based network (Tate, Column 51, Lines 36-41 discloses synchronization cell being passed to interface card before being placed onto a transmit by-pass bus to get received by a

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downstream card; Tate, Column 6, Lines 46-52 discloses by-pass architecture enables portions of a communication system to be isolated and passed whilst portions of the system continue to function).

26. As for Claim 26, Jordan in view of Tate disclose the synchronizer (Tate, Column 51, Lines 26-355 discloses a switch operation synchronization circuit) provides the synchronization signal to the first TDM communication entity and the second TDM communication entity over at least one connection, the at least one connection being separate from the packet-based network (Tate, Column 51, Lines 36-41 discloses synchronization cell being passed to interface card before being placed onto a transmit by-pass bus to get received by a downstream card; Tate, Column 6, Lines 46-52 discloses by-pass architecture enables portions of a communication system to be isolated and passed whilst portions of the system continue to function).

27. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jordan et al (US 6,724,751) in view of Tate et al (US 5,933,607) as applied to claim 5 above, and further in view of Hoskins et al (US 2003/0106067).

28. As for Claim 7, Jordan in view of Tate do not expressly disclose the shared media network includes at least one packet switch, and wherein the act of transmitting further comprises an act of forwarding the packet by the at least one packet switch toward the destination.

29. Hoskins discloses in the same field of endeavor the shared media network (Paragraph 0092 discloses the shared media of internal and/or external computer buses as well as the shared media of LANs) includes at least one packet switch (Paragraph 0128 discloses a cable modem interfaced with three IP devices), and wherein the act of transmitting further comprises an act of

forwarding the packet by the at least one packet switch toward the destination (Paragraph 0117 discloses forwarding the packet to a router or gateway).

30. Hoskins discloses this difference for the purpose of integrating processes to allow service providers and/or subscribers to utilize an integrated user interface for configuring and/or diagnosing connectivity problems with a network and for setting up user processes such as, but not limited to, network address translation (Paragraph 0034).

31. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the combined method of Jordan and Tate and add to it the feature as disclosed above by Hoskins to create a method for distributing time division multiplexed data in a data communication device integrating processes to allow service providers and/or subscribers to utilize an integrated user interface for configuring and/or diagnosing connectivity problems with a network and for setting up user processes such as, but not limited to, network address translation.

32. As for Claim 8, Jordan in view of Tate further in view of Hoskins disclose the act of forwarding includes an act of determining where to forward the packet based on Ethernet MAC header information only (Hoskins, Paragraph 0117 discloses the sending network device generally determines the MAC address of the destination network device for forwarding a network packet).

33. As for Claim 9, Jordan in view of Tate further in view of Hoskins disclose the packet-based network includes a point-to-point connection between an entity (Hoskins, Figure 5 displays a point-to-point communications medium between devices) associated with the TDM source and an entity associated with the TDM destination (Tate, Column 46, Lines 58-64

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discloses carrying a group of TDM channels from source to destination), and wherein the act of transmitting further comprises an act of transmitting the packet over the point-to-point connection (Hoskins, Paragraph 0223 discloses communicate Ethernet frames using Point-to-Point Protocol and would commonly be implemented over point-to-point communications media).

34. Claims 10 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jordan et al (US 6,724,751) in view of Tate et al (US 5,933,607) and further in view of Jorgenson et al (US 2002/0110157).

35. As for Claim 10, Jordan in view of Tate disclose the TDM bus has an associated TDM frame period (Jordan, Column 8, Lines 8-18 discloses a separate time slot on the TDM bus); and a TDM frame period (Jordan, Column 8, Lines 8-18 discloses time slot).

36. Jordan in view of Tate do not expressly disclose wherein a latency associated with transmitting the packet is less than.

37. Jorgenson discloses in the same field of endeavor wherein a latency associated with transmitting the packet is less than (Paragraph 0030 discloses delay value is much less than the frame period).

38. Jorgenson discloses this difference for the purpose of providing transparently transporting signals through a high speed data network (Paragraph 0003).

39. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the combined method of Jordan and Tate and add to it the feature as disclosed above by Jorgenson to create a method for distributing time division

multiplexed data in a data communication device which can transparently transport signals through a high speed data network.

40. As for Claim 26, Jordan in view of Tate disclose one TDM frame period (Jordan, Column 8, Lines 8-18 discloses a separate time slot on the TDM bus).

41. Jordan in view of Tate do not expressly disclose the latency associated with transmitting the packet to the second TDM communication entity is less than.

42. Jorgenson discloses in the same field of endeavor the latency associated with transmitting the packet to the second TDM communication entity is less than (Paragraph 0030 discloses delay value is much less than the frame period).

43. Jorgenson discloses this difference for the purpose of providing transparently transporting signals through a high speed data network (Paragraph 0003).

44. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the combined system of Jordan and Tate and add to it the feature as disclosed above by Jorgenson to create a system for communicating time division multiplexed data which can transparently transport signals through a high speed data network.

45. Claims 12 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jordan et al (US 6,724,751) in view of Tate et al (US 5,933,607) as applied to claim 1 above, and further in view of Yoshiharu Kato (US 6,529,523).

46. As for Claim 12, Jordan in view of Tate disclose the act of inserting the at least one received timeslot into a packet (Tate, Column 37, Lines 50-58 discloses insert 8 bit timeslot information into frames).

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47. Jordan in view of Tate do not expressly disclose includes an act of inserting the at least one timeslot into a payload section of the packet.

48. Kato discloses in the same field of endeavor includes an act of inserting the at least one timeslot into a payload section of the packet (Column 8, Lines 34-43 discloses shared data of time slot numbers that are inserted into the payload data).

49. Kato discloses this difference for the purpose of reducing waste of bandwidth (Column 2, Lines 13-27).

50. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the combined method of Jordan and Tate and add to it the feature as disclosed above by Kato to create a method for distributing time division multiplexed data in a data communication device which can reduce waste of bandwidth.

51. As for Claim 16, Jordan in view of Tate further in view of Kato disclose the act of transmitting further comprises an act of transmitting the packet in order compared to one or more other packets having one or more timeslots (Kato, Column 7, Line 61 – Column 8, Line 18 discloses the data that has been sequentially read out of the time switch memory at the time slot period and successively outputs data from the starting address at a prescribed speed) from the at least one TDM source (Tate, Column 46, Lines 58-64 discloses carrying a group of TDM channels from source to destination).

52. As for Claim 17, Jordan in view of Tate further in view of Kato disclose the act of transmitting the packet further comprises an act of transmitting the packet to the destination over a packet-based network (Jordan, Column 13, Lines 39-58 discloses communication through a packet-switched network), and wherein the act of transmitting the packet further comprises

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transferring the packet and the one or more other packets to the destination in order (Kato, Column 7, Line 61 – Column 8, Line 18 discloses the data that has been sequentially read out of the time switch memory at the time slot period and successively outputs data from the starting address at a prescribed speed).

53. Claims 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jordan et al (US 6,724,751) in view of Tate et al (US 5,933,607) and further in view of Khan et al (US 2004/0131072).

54. As for Claim 14, Jordan in view of Tate do not expressly disclose the act of transmitting further comprises an act of transmitting, in parallel, the packet to the destination over a plurality of redundant connections.

55. Khan discloses in the same field of endeavor the act of transmitting further comprises an act of transmitting, in parallel, the packet to the destination over a plurality of redundant connections (Paragraph 0025 discloses redundant links used in conjunction with other resources can allow any combination of redundancy to allow control data to get transmitted simultaneously on logical separate channels).

56. Khan discloses this difference for the purpose of providing communication between devices with incompatible bus interfaces on physically separate cards (Paragraph 0025).

57. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the combined method of Jordan and Tate and add to it the feature as disclosed above by Khan to create a method for distributing time division multiplexed data in a data communication device to provide communication between devices with incompatible bus interfaces on physically separate cards.

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58. As for Claim 15, Jordan in view of Tate do not expressly disclose the act of transmitting the packet includes transmitting the packet substantially simultaneously over the plurality of redundant connections.

59. Khan discloses in the same field of endeavor the act of transmitting the packet includes transmitting the packet substantially simultaneously over the plurality of redundant connections (Paragraph 0025 discloses redundant links used in conjunction with other resources can allow any combination of redundancy to allow control data to get transmitted simultaneously on logical separate channels).

60. Khan discloses this difference for the purpose of providing communication between devices with incompatible bus interfaces on physically separate cards (Paragraph 0025).

61. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the combined method of Jordan and Tate and add to it the feature as disclosed above by Khan to create a method for distributing time division multiplexed data in a data communication device to provide communication between devices with incompatible bus interfaces on physically separate cards.

Response to Arguments

62. Applicant's arguments with respect to claims 1-27 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

63. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent Document	Inventors	Publication Date
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US 2004/0001516	Friedrichs et al	January 1, 2004
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64. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT ROOT whose telephone number is 571-270-1960. The examiner can normally be reached on Monday to Friday from 7:30am to 5:00pm Eastern.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Robert Root/

Examiner, Art Unit 2616

/Huy D. Vu/

Supervisory Patent Examiner, Art Unit 2616